UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

JUL 19 2017

Honorable Virgil A. Siow
Governor
Pueblo of Laguna
P.O. Box 194
Laguna, NM 87026

Dear Governor Siow:

The Environmental Protection Agency (EPA) has completed its review of the *Pueblo of Laguna Water Quality Standards*. These standards were adopted by the Pueblo of Laguna in April 2014, and submitted to the EPA for approval in September 2014.

I am pleased to inform you that the EPA is approving most of the provisions in the standards, pursuant to section 303(c) of the Clean Water Act and the implementing regulation at 40 CFR part 131, as documented in the enclosure. EPA's approval of the standards is applicable to waters included in the agency's December 2016 approval of the Pueblo of Laguna's request for treatment in a similar manner as a state to administer the Clean Water Act (CWA) section 303(c) and section 401 programs.

The Agency considers specific items in the *Pueblo of Laguna Water Quality Standards* to be assessment or implementation provisions, rather than elements of water quality standards under Clean Water Act section 303(c). Part II of the enclosure summarizes these provisions, which do not require EPA review under CWA section 303(c). EPA also is taking no action on the definition for "Groundwater" and "Pueblo Waters" in Section 11-2-3, as applied to waters beyond the scope covered by the CWA, and on other provisions applicable to groundwater resources.

Section 7(a)(2) of the Endangered Species Act requires that all federal agencies engage in consultation to ensure their actions are not likely to jeopardize the continued existence of any threatened or endangered species or result in adverse modification of designated critical habitat. EPA has determined that approval of the *Pueblo of Laguna Water Quality Standards* will have no effect on federally-listed threatened and endangered species or on critical habitat.

We look forward to continuing to work with you and your staff on the Pueblo of Laguna's water quality program. If you have any questions or concerns, please contact me at (214) 665-7101 or have your staff contact Diane Evans at (214) 665-6677.

Sincerely,

William K. Honker, P.E.
Director
Water Division

Enclosure

cc: Greg Jojola, Director, Environmental Program
Adam Ringia, Director, Environmental & Natural Resources Dept.

Enclosure

Record of Decision for approval of the *Pueblo of Laguna Water Quality Standards*
July 2017

The Environmental Protection Agency (EPA) has completed its review of the *Pueblo of Laguna Water Quality Standards* (adopted April 2014) and determined that the standards are approvable under section 303(c) of the Clean Water Act (CWA). EPA's review found that the standards:

- include designated uses consistent with CWA sections l0l(a)(2) and 303(c) for surface waters;
- contain narrative and numeric criteria protective of those designated uses;
- include an antidegradation policy consistent with 40 CFR 131.12;
- include adequate documentation of methods and analyses used in developing the standards; and
- were duly adopted pursuant to applicable legal procedures.

This enclosure provides a summary of the provision and the action taken by EPA, including: Part I. Provisions in the 2014 WQS that are approved for purposes of Clean Water Act (CWA) section 303(c); and Part II. Provisions in the 2014 WQS for which EPA is taking no action under CWA section 303(c).

In some cases, EPA has determined that a particular provision is not a water quality standard under CWA section 303(c). EPA is taking no action on these provisions because they are not (1) legally binding provisions adopted or established pursuant to Tribal law that (2) address designated uses, criteria, or antidegradation, and (3) describe the desired condition or level of protection of the water body. Also, the *Pueblo of Laguna Water Quality Standards* include provisions related to protection of ground water. EPA does not have the authority to approve or disapprove groundwater provisions that are unrelated to surface water, thus is taking no action on these provisions.

I. PROVISIONS IN THE 2014 WQS THAT ARE APPROVED FOR PURPOSES OF CWA SECTION 303(C)

Subchapter I. General Provisions

Subchapter 1 includes narrative provisions which identify the Pueblo of Laguna's authority to adopt and implement water quality standards; discuss the applicability and modification of the standards; and, establish procedures for implementation of the standards.

Section 11-2-1. Authority and Purpose states that the Pueblo of Laguna is exercising its authority to adopt and enact the water quality standards in order to protect, maintain and improve the quality of the tribe's waters.

Section 11-2-2. Applicability identifies the applicability of the water quality standards to all Pueblo waters and to all activities and persons within the Pueblo of Laguna.

Under Section 11-2-3. Definitions, the Pueblo of Laguna adopted definitions for the following terms:

Acute Criteria	Ceremonial Use	Designated Use
Acute Toxicity	Chronic Criteria	Director
Attainable Use	Chronic Toxicity	Domestic Water Supply
Aquatic and Wildlife Habitat	Clean Water Act	Drinking Water
Best Management Practices	Coldwater Fishery	Effluent
Bioaccumulation	Criteria	Ephemeral Water

Existing Uses
Fish Culture
Geometric Mean
Groundwater *
Groundwater Recharge
High Quality Coldwater Fishery
Industrial Water Supply
Intermittent Stream
Irrigation
Livestock and Wildlife Watering
Marginal Coldwater Fishery
Mixing zone
Nonpoint Source
NTU
Oil
Outstanding Tribal Resource Waters
Perennial Water
Person
Point Source
Pollutant
Pollution
Primary Human Contact
Program Manager
Pueblo of Laguna
Pueblo Waters *
Secondary Human Contact
Turbidity
Warmwater Fishery
Water Body
Wetlands

* Please see Part II of this enclosure regarding EPA's action on the definitions of Groundwater and Pueblo Waters

Section 11-2-4. Authority and Responsibilities delegates authority to the administer the water quality standards to the Laguna Environmental Program, under the direction of the Laguna Environmental and Natural Resources Department, and as approved by the Tribal Council.

Section 11-2-5. Revisions to the Laguna Water Quality Standards, Part A states that the Pueblo of Laguna will conduct triennial revisions of standards to incorporate new information and will provide an opportunity for public comment on proposed revisions. Part B and Part C include the Pueblo of Laguna's administrative processes for public participation on revisions of water quality standards, as well as the process for judicial review of challenges to the standards. (Please see Part II of this enclosure regarding EPA's action on Section 11-2-5, parts B and C)

Section 11-2-6. Severability states that if any provision of the standards is held to be invalid to a person or circumstance, the remaining provisions in the standards and the application of the provision to other persons and circumstances are not affected.

Section 11-2-8. Collaboration with Federal and State Agencies states that the Pueblo of Laguna will collaborate with state and federal agencies for managing water resources.

> **EPA review:** EPA's review found that the provisions identified above support the implementation of the water quality standards and are consistent with the goals of CWA section 101(a)(2) and section 303(c), the federal regulation at 40 CFR part 131, and EPA guidance. Sources of the definitions include federal statutes, EPA regulations and guidance, and other technical references.

Subchapter II. Antidegradation Policy and Implementation Policy

Section 11-2-21. Antidegradation Policy contains provisions to maintain and protect exiting uses and water quality; protect high quality waters; and maintain and protect waters of exceptional recreational, cultural or ecological significance, which may be designated as an Outstanding Tribal Resource Water.

The antidegradation policy requires that prior to allowing a lower level of water quality in high quality waters, the following actions will occur:

- an opportunity for public comment will be provided
- regulatory requirements for point sources and best management practices for control of nonpoint sources will be evaluated; and
- the need for economic or social development will be documented.

The antidegradation policy also states that implementation methods consistent with CWA section 316 will be used where there may be potential impacts from thermal discharges.

Under Section 11-2-22. Implementation, the Environmental Program is designated to implement the *Pueblo of Laguna Water Quality Standards*. The Implementation Plan outlines activities that the Department of Natural Resources will use to implement the standards. These activities include: monitoring and assessment of Pueblo waters; review of draft permits; issuance of section 401 certification for federal permits; coordination with other Indian tribes, and local, state and federal agencies; implementation of inspection programs; evaluation of current wastewater systems; assistance with the implementation of best management practices; evaluation of instream flows; review of antidegradation requirements for regulated activities, and implementation of policies to protect Outstanding Tribal Resource Waters. Section 11-2-22 also states that standards may be revised where it has been determined that attainable water quality is less than designated uses, consistent with the federal regulation at 40 CFR 131.10(g).

> **EPA review:** The antidegradation policy and implementation plan in Subchapter II are consistent with the intent of the CWA and the implementing regulation. EPA is approving Subchapter II of the *Pueblo of Laguna Water Quality Standards.*

Subchapter III. Narrative Water Quality Standards

The provisions in Subchapter III apply to all waters of the Pueblo of Laguna. Section 11-2-31. General Standards includes narrative standards ("free froms") to protect surface waters from substances or contaminants that: form bottom deposits that may affect aquatic biota; float as objectionable oils, scum, foam, grease or other suspended materials; produce objectionable color, odor or taste in water; cause objectionable taste in fish or other edible animal or plant life; produce nuisance conditions that promote algal growth or the presence of non-indigenous of plant or animal life; are pathogenic; or result in turbidity that reduces light transmission or alters color or visibility.

Section 11-2-31 also includes narrative criteria for pollutants which may adversely affect human health, public safety or public welfare, or would adversely affect indigenous plant and animal communities. Part A includes numeric criteria for oil and grease, color, and turbidity. Part C contains a narrative criterion precluding concentrations of toxic materials which are harmful to human, animal, plant or aquatic life. An allowance for limited chronic toxicity within a mixing zone is included in Part C, however, acute toxicity is prohibited in surface waters. Part D includes narrative criteria to prohibit large debris, such as trash or equipment, in Pueblo waters.

> **EPA review:** The narrative and numeric criteria established in Section 11-2-31 are consistent with EPA's guidance for criteria to protect aesthetics and general water quality. The numeric criteria for oil and grease, color and turbidity are also based on EPA's recommendations published in the Red Book and on information from other documents. [1] The Pueblo of Laguna adopted human health criteria to ensure protection of humans consuming fish and to ensure protection of humans for primary and secondary contact recreation. EPA is approving Section 11-2-31, as it is consistent with CWA section 303(c) and the implementing regulation at 40 CFR 131.11.

Section 11-32-2. Temperature includes narrative and numeric criteria to protect aquatic life uses in the Pueblo of Laguna's surface waters. The provision includes maximum temperature differentials (5 ^{0}F in steams or 3 ^{0}F in lakes).

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[1] USEPA. *Quality Criteria Water 1976* (the "Red Book"). Office of Water and Hazardous Materials. U.S. Environmental Protection Agency. Washington, DC. 256 pp.

EPA review: The narrative and numeric criteria for temperature are based on EPA's section 304(a) criteria recommendations.[2] This provision is intended to protect aquatic life species from anthropogenic increases in water temperature and complements the numeric criteria applicable under the fishery uses in Section 11-2-41. EPA approves the temperature criteria established in Section 11-32-2.

Section 11-2-33. Minerals includes a narrative criterion which prohibits an increase more than a third over naturally-occurring levels or alteration of existing levels by discharges or instream activities.

EPA review: The narrative criterion is consistent with recommendations published in the Federal Water Pollution Control Administration's Green Book to protect aquatic life from dissolved materials. EPA is approving the minerals criteria in Section 11-2-33.

Section 11-2-34. Radioactive Materials includes a narrative criterion that specifies standards published under the Safe Drinking Water Act (SDWA) shall not be exceeded. The provision also allows higher levels, where naturally-occurring, unless a more stringent standard to protect a designated use is applicable.

EPA review: The narrative criterion is consistent with section 303(c) of the CWA and the Agency's implementing regulation at 40 CFR 131.11. EPA approves Section 11-2-34. Radioactive Materials, insofar as the standards address radioactive materials that are "pollutants" under the CWA. EPA's regulations define "pollutant" to include radioactive materials except those regulated under the Atomic Energy Act of 1954, as amended. (See 40 CFR 122.2). See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976).

Section 11-2-35. Determining Compliance with Narrative Standards identifies technical references for assessing the narrative criterion for toxic substances and additional references for implementation of the narrative criteria in sections 11-2-31, 11-2-32 and 11-2-33.

EPA review: The narrative criterion and implementing provisions are consistent with EPA guidance. EPA approves Section 11-2-35.

Section 11-2-36. Biological Criteria includes a narrative criterion for protection of the biological integrity of the aquatic life community. The provision states that assessment of biological integrity will be assessed using the fish community and other components of the aquatic community, as compared with waters "least-disturbed" conditions in the Middle Rio Grande Basin.

EPA review: The narrative provision establishes the Pueblo of Laguna's intent and authority to protect water resources based on a direct measure of wildlife and aquatic community health. EPA finds that the provision in Section 11-2-36 is consistent with EPA guidance and the goals of the CWA and approves the narrative biological criterion.

Section 11-2-37. Mixing Zones includes a provision to allow mixing zones for chronic criteria in perennial streams, lakes and reservoirs. The mixing zone policy requires that narrative water quality standards in 11-2-31 be met and that a zone of passage for aquatic life be maintained. Acute toxicity, including exceedances of acute numeric criteria, is prohibited. Chronic toxicity within the mixing zone is limited to a portion of a waterway. The size of the mixing zones may be limited by cross-sectional area or by a percentage of stream flow. Mixing zones are not allowed for the following bioaccumlative

[2] Federal Water Pollution Control Administration. 1968. Water Quality Criteria (the "Green Book"), Report of the National Technical Advisory Committee to the Secretary of the Interior. U.S. Department of the Interior. Washington, DC. 234 pp.

pollutants: chlordane, DDT and metabolites, dieldrin, dioxin, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, lindane, mercury, polychlorinated biphenyls and toxaphene.

> **EPA review:** The mixing zone policy follows the recommendations found in EPA's *Water Quality Standards Handbook* (see Chapter 5) and in the Great Lakes Guidance established in 40 CFR part 132.[3] The designated uses in the water quality standards are required to be maintained in all parts of the water body. EPA approves Section 11-2-37. Mixing Zones.

Section 11-2-38. Wetlands includes goals for the protection of wetlands, which include the attainment of existing uses and implementation of the antidegradation policy. The provision identifies wetlands, other than those constructed for waste treatment, as waters of the Pueblo of Laguna. Section 11-2-38 includes narrative criteria to maintain water quality at natural background levels, within the normal range of variation of specific wetlands.

> **EPA review:** The narrative provision establishes the Pueblo of Laguna's intent and authority to protect wetlands based on biological and physical characteristics. EPA finds that this provision is consistent with EPA guidance and the goals of the CWA. EPA is approving Section 11-2-38. Wetlands.

Subchapter IV. Designated Uses and Associated Numeric Water Quality Standards

Section 11-2-41 includes designated uses, with narrative and numeric criteria to support uses. Additional criteria to support designated uses are found in the appendices of the *Pueblo of Laguna Water Quality Standards*. Please see Part II of this enclosure regarding EPA's action on the application of designated uses to groundwater.

Part A Drinking Water and Part B. Domestic Water Supply Use. The Drinking Water use is intended to provide water quality such that disinfection or other treatment is not needed. The Drinking Water use is protected by the criteria in Appendix I. Organoleptic Criteria and the criteria in Appendix V. Table 1. Human Health Criteria to protect for consumption of water and organisms and consumption of organisms only. The Domestic Water Supply use is intended to protect sources that may be used as a potable water supply. This use is protected by the criteria in Appendix V. Table 2. Standards for Domestic Water Supply.

> **EPA review:** The criteria in Appendix I and Appendix V are protective of the Drinking Water and Domestic Water Supply uses. EPA approves the Drinking Water use and the Domestic Water Supply use. Please see Part II of this enclosure regarding EPA's actions on the application of these designated uses and the criteria in Appendix V. Table 2 to groundwater.

Part C. Groundwater Recharge. The Pueblo of Laguna adopted the Groundwater Recharge use to protect surface waters that are a source of groundwater. This use is protected by the criteria in Appendix V. Table 2. Standards for Domestic Water Supply.

> **EPA review:** EPA approves the Groundwater Recharge use as the criteria in Table 2 of Appendix V are protective of the uses. Please see Part II of this enclosure regarding EPA's actions on the application of designated uses and the criteria in Appendix V. Table 2 to groundwater.

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[3] USEPA.1994. *Water Quality Standards Handbook: Second Edition.* Office of Water. U.S. Environmental Protection Agency. Washington D.C. EPA 823-B-94-005a. Portions of 1994 edition, with updated sections available at: http://water.epa.gov/scitech/swguidance/standards/handbook/index.cfm

Part D. Primary Human Contact/Ceremonial. The Primary Human Contact/Ceremonial use protects religious, traditional and cultural purposes by members of the Pueblo of Laguna. Criteria for *Escherichia coli (E. coli)* and enterococci were adopted to protect this use. The criteria for *E. coli* include a geometric mean value and a single sample maximum. The criterion for enterococci is based on a geometric mean. A narrative criterion to prevent nuisance conditions was also adopted under this use.

The human health criteria in Table 1 of Appendix V for consumption of water and organisms and consumption of organisms only are also applicable to protect this use. Criteria for the following substances are also applicable: diazinon, ethylbenzene, methoxychlor, 2,4-dichlorphenoxyzcetic acid, toluene, trihalomethanes, barium, beryllium, cadmium, chromium, cyanide, fluoride, trichloroethylene, 1,1,1-trichloroethane, xylenes, antimony, total inorganic nitrogen, mercury, selenium and thallium.

> **EPA review:** The Pueblo of Laguna adopted criteria for the Primary Human Contact/Ceremonial use based on EPA's 1986 recreational criteria document.[4] The risk level of 4 illnesses/1000 swimmers for the *E. coli* criteria (based on "highly credible gastrointestinal illness"), is within the range that EPA has determined to be acceptable in the agency's updated criteria document.[5] The risk level of the enterococci criterion is 32 illnesses/1000 swimmers is included in EPA's current criteria recommendations. The narrative criterion prohibiting nuisance conditions is protective of the use. The numeric criteria for toxic substances are based on SDWA values, are also protective, and are superseded by any more stringent criteria in Table 1 of Appendix V. EPA approves the Primary Human Contact/Ceremonial use and the criteria in Part D.

Part E. Secondary Human Contact. The Secondary Human Contact use is established to protect activities such as fishing and boating. Criteria for *E. coli* are based on an illness rate of 8 illnesses/1000 swimmers were adopted to protect this use and include a geometric mean and a single sample maximum. A geometric mean criterion of 33 colonies/100 ml for enterococci was also adopted. A pH criterion (range) was adopted, along with a narrative criterion to prevent nuisance conditions.

> **EPA review:** The criteria adopted for the Secondary Human Contact use based on EPA's 1986 recreational criteria document. The risk level for the *E. coli* criteria is protective of the use and within the range that EPA has determined to be acceptable under CWA section 303(c). The narrative criteria prohibiting nuisance conditions is protective of the use. The criteria for pH are consistent with recommendations in EPA's Blue Book.[6] EPA approves the Secondary Human Contact use and the criteria in Part E.

Part F. Wildlife Habitat. The Pueblo of Laguna adopted a wildlife habitat use to protect water used by non-domesticated animals. Criteria to protect the wildlife habitat use include a narrative criterion to protect animal and plant species from substances which bio-accumulate and numeric criteria for DDT and metabolites, polychlorinated biphenyls (PCBs), mercury and selenium.

> **EPA review:** EPA has not established nationwide numeric criteria recommendations to protect wildlife, but has published criteria for a limited number of substances and a methodology to calculate criteria under the federal regulation at 40 CFR part 132 (Water Quality Guidance for the Great Lakes System). The narrative criterion allows the Pueblo of Laguna to use EPA's methodology or other information to interpret the criterion as necessary. The mercury criterion of

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[4] USEPA. 1986. U.S. EPA 1986. EPA's Ambient Water Quality Criteria for Bacteria – 1986. U.S. Environmental Protection Agency: Washington, D.C. EPA440/5-84-002. 24 pp.

[5] USEPA. 2012. *Recreational Water Quality Criteria.* EPA-820-F-12-058. U.S. Environmental Protection Agency. Washington, D.C. 69 pages.

[6] National Academy of Sciences, National Academy of Engineering. 1973. *Water Quality Criteria 1972.* EPA-R3-73-003. U.S. Government Printing. Office. Washington, D.C.

0.0011 ug/L in the *Pueblo of Laguna Water Quality Standards* is approximately the same as the wildlife criterion (0.0013 ug/L) in 40 CFR part 132. The selenium criterion of 2 ug/L value is based on a previous recommendation from the U.S Fish and Wildlife Service to be protective of threatened or endangered species. EPA is approving the Wildlife Habitat use, the narrative criteria to protect the use and the numeric criteria for mercury and selenium. Please see Part II of this enclosure regarding EPA's action on the numeric criteria for DDT and PCBs.

Part. G. High Quality Coldwater Fishery, Part H. Coldwater Fishery, and Part I. Warmwater Fishery. The Pueblo of Laguna adopted three fishery uses to support different aquatic communities. A dissolved oxygen criterion of 6.0 mg/L and a temperature criterion of 20 °C were adopted under the High Quality Coldwater Fishery and the Coldwater Fishery uses. A dissolved oxygen criterion of 5.0 mg/L and a maximum temperature criterion of 32.2 °C were adopted to protect the warmwater use.

For pH criteria, ranges of 6.6 – 8.8 for the High Quality Coldwater Fishery and Coldwater Fishery uses and 6.0 -9.0 for the Warmwater Fishery use were adopted. A turbidity criterion of 10 NTU and a conductivity criterion of 300 umhos/cm (unless the natural background is higher) were adopted to protect the High Quality Coldwater Fishery use. A reference to the ammonia criteria in Appendix III are included under each fishery use. Criteria for total residual chlorine of 2 ug/L and 11 ug/L, apply to the High Quality Coldwater Fishery use, and to the Coldwater Fishery and Warmwater Fishery uses, respectively.

EPA review: The designated uses are protective of the existing aquatic life uses in surface waters of the Pueblo of Laguna. The criteria for dissolved oxygen, temperature, pH and chlorine are based on EPA's recommendations published under CWA section 304(a). The chlorine criterion of 2 ug/L to protect the high quality coldwater fishery use is based on recommendations previously provided by the U.S. Fish and Wildlife Service. The conductivity and turbidity criteria for the high quality coldwater Fishery use is based on the New Mexico *Standards for Interstate and Intrastate Surface Waters* (current or previous versions). The uses and criteria are also protective of downstream uses established by the state of New Mexico and the Pueblo of Isleta. EPA is approving the High Quality Coldwater Fishery use, the Coldwater Fishery use, the Warmwater Fishery use, and the criteria under each of the fishery uses.

Part J. Fish Culture. The Pueblo of Laguna adopted the Fish Culture use to protect waters where fish are raised. The criteria in Section 11-2-31. General Standards are applicable to the Fish Culture use.

EPA review: The criteria in Section 11-2-31 are protective of the Fish Culture use. In addition, the High Quality Fishery use and associated criteria are applicable to each water body designated with a Fish Culture use. EPA is approving the Fish Culture use.

Part K. Aquatic Life. The Pueblo of Laguna adopted the Aquatic Life use, to complement the fishery uses established under Part G, Part H and Part I. Criteria to protect the Aquatic Life use are found in Appendix II. Aquatic Life Criteria and in Appendix III. Ammonia Criteria.

EPA review: The criteria in Appendices II and III are based on recommendations published under CWA section 304(a) and are protective of the Aquatic Life use. EPA is approving the Aquatic Life use.

Part L. Irrigation. The Pueblo of Laguna adopted numeric criteria for the following substances to protect the Irrigation use: aluminum, boron, cobalt, fluoride, lithium, molybdenum, and vanadium. For uranium, the narrative criterion under Section 11-2-34. Radioactive Materials is applicable.

EPA review: The criteria for the Irrigation use are based on EPA's recommendations published in the Blue Book and are protective of the use. EPA approves the Irrigation use.

Part M. Livestock and Wildlife Watering. The Pueblo of Laguna adopted criteria for the following substances to protect the Livestock and Wildlife Watering use: aluminum, arsenic, boron, cadmium, chromium, cobalt, copper, fluoride, total mercury, selenium and vanadium.

> **EPA review:** The criteria for the Livestock and Wildlife Watering use are based on EPA's recommendations published in the Blue Book and are protective of the use. EPA approves the Livestock and Wildlife Watering use.

Part N. Industrial Water Supply. The Pueblo of Laguna adopted the Industrial Water Supply use where a water body is used for the production of goods or services. Criteria to protect this use are found in Section 11-2-31. General Standards.

> **EPA review:** EPA has not established recommended criteria for industrial water supplies, which is a non-101(a)(2) use under the Clean Water Act. EPA's Blue Book includes ranges of values for some substances used by different industries (e.g., textiles, paper mills). The Industrial Water Supply use is not currently designated for any waters in the *Pueblo of Laguna Water Quality Standards*. The narrative and numeric criteria in Section 11-2-31 are protective of this use. The values published in the Blue Book could be used to interpret the narrative criterion, in the event that the Industrial Water Supply use is designated in a future revision of the water quality standards. EPA approves the Industrial Water Supply Use.

Part O. Outstanding Tribal Resource Waters. The Pueblo of Laguna adopted the Outstanding Tribal Resource Waters use to provide the highest level of protection to unique sacred and cultural resources. This use is protected by the human health criteria in Table 1 of Appendix V for consumption of water and organisms and consumption of organisms only.

> **EPA review:** The criteria in Appendix V are protective of the use. EPA approves the Outstanding Tribal Resource Waters use.

Section 11-2-42. Designated Use Modifications. This section references Section 11-2-5 of the standards and the federal regulation at 40 CFR 131.10 for modifying the uses or establishing a subcategory a use.

> **EPA review:** The provisions identified above support the implementation of other provisions in the water quality standards and are consistent with the CWA, the federal regulation at 40 CFR Part 131, and EPA guidance. EPA approves Section 11-2-42.

Section 11-2-43. Designated Use Table. Section 11-2-43 assigns designated uses for individual surface water bodies and for ground water aquifers and formations.

The following uses apply to all surface waters: Primary Human Contact/Ceremonial, Wildlife Habitat, Aquatic Life, and Livestock and Wildlife Watering. The Secondary Human Contact use is designated for all surface waters, with the exception of wetlands.

The Outstanding Tribal Resource Waters use is designated for mountain streams and springs, the Rio Paguate above the Jack Pile Mine, Water Canyon Creek and Encinal Creek. The Drinking Water use is also designated for these same waters, and for mountain ponds.

The High Quality Coldwater Fishery use and the Fish Culture use are designated for mountain ponds, mountain streams and springs, and for the Rio Paguate above Jack Pile Mine. Water Canyon Creek is also designated with the High Quality Coldwater Fishery use. The Coldwater Fishery use is designated for Encinal Creek. The Warmwater Fishery use is designated for the Rio Paguate below the Jack Pile Mine and Encinal Creek.

The Domestic Water Supply use is designated for all surface waters, with the exception of the Rio Paquate below the Jack Pile Mine and the Rio Puerco. The Irrigation Use is designated for the Rio San Jose, the Rio Paguate (above and below the Jack Pile Mine), Water Canyon Creek, Encinal Creek and irrigation ditches. The Industrial Water Supply use is not currently designated for any surface waters.

> **EPA review:** The designated uses are consistent with the goals established in CWA section 101(a)(2) and the implementing regulation at 40 CFR part 131 and are approved by EPA. Please see Part II of this enclosure regarding EPA's action on the application of designated uses to groundwater on page 28 of the *Pueblo of Laguna Water Quality Standards*.

Section 11-2-44. Application and Construction includes provisions for implementation of water quality standards. Part A includes a requirement that the most stringent standard necessary to protect all uses be applied in a water body with multiple designated uses. Part B requires that standards for total mercury, total DDT and metabolites, and total PCBs be met at all stream flows, but allows other pollutants to be implemented using a critical low flow. Human health criteria are implemented using the harmonic mean flow, with a modified formula for calculation of critical flow in ephemeral waters. Part B also includes a critical design flow of 4Q3 for the implementation of numeric criteria, other than human health criteria. Part C states that protection of designated uses shall provide for the attainment of uses in downstream waters. Part D specifies that the standards will be used to manage discharges from both point and nonpoint sources of pollution, rather than to control natural phenomena.

> **EPA review:** EPA's derivation of criteria published under CWA section 304(a) includes magnitude, duration and frequency components. Implementation of numeric criteria through a critical low flow value is the process which accounts for (and limits) the frequency of allowable excursions of the criteria. Use of the 4Q3 critical flow is consistent with the approach used by the state of New Mexico and also provides for protection of uses in the downstream waters of the Pueblo of Isleta. EPA approves the provisions in Section 11-2-44.

Section 11-2-45. Additional Numeric Water Quality Criteria includes a reference to the numeric criteria in Appendices I – III to protect aquatic life and human health.

> **EPA review:** EPA approves the provision at Section 11-2-45, as these criteria support the designated uses in Subchapter IV. Please see below for review of the numeric criteria in each appendix.

Subchapter V. Sampling and Analysis, Variances, and Exceedances

Section 11-2-52. Variances allows the Pueblo of Laguna to approve a variance to a water quality standard for a point source discharge, under specific circumstances. The provision requires that the facility document that it is not technically feasible to achieve compliance with the standard within three years and that the cost of treatment would result in substantial and widespread economic and social impact. Re-evaluation of the variance is required at least every three years, and additionally when a permit is issued or re-issued under the National Pollutant Discharge Elimination System (NPDES). Compliance with technology-based limits is required and other point sources will be required to meet applicable standards. An applicant for a variance must submit detailed information on the existing control technologies in place, and on the technologies available to achieve compliance. Section 11-2-52 also includes the requirement for public participation on a proposed variance and submittal to EPA for approval. This provision also specifies that variances are not allowed in NPDES permits discharging to Outstanding Tribal Resource Waters.

> **EPA review:** Although the Pueblo of Laguna standards were adopted prior to EPA's revision of the federal regulation in 2015, the variance provision includes the elements outlined in the

updated regulation. The Pueblo of Laguna's provision identifies factor 6 (economics) of 40 CFR 131.10(g) as the basis for a variance requests. If appropriate, the Pueblo of Laguna could also allow a variance based on factors 1-5 of 40 CFR 131.10(g). EPA approves the variance provision, as it is consistent with the federal regulation at 40 CFR 131.14.

Section 11-2-53 Compliance Schedules allows a schedule to be included in an NPDES permit, provided that compliance with the standard be met at the earliest practicable time. This provision also specifies that compliance schedules are not allowed in NPDES permits discharging to Outstanding Tribal Resource Waters.

EPA review: EPA's review finds that the compliance schedule provision supports the implementation of other provisions in the water quality standards and is consistent with the federal regulations at 40 CFR 122.47(a)(1) and 40 CFR 131.15, and with EPA guidance. EPA approves this revision

Appendix I: Organoleptic Effect Criteria

The Pueblo of Laguna adopted criteria to protect for organoleptic effects for the following pollutants:

Acenapthene
Monochlorobenzene
3-Chlorophenol
4-Chlorophenol
2,3 Dichlorophenol
2,5 Dichlorophenol
2,6 Dichlorophenol
3,4 Dichlorophenol
2,4,5 Trichlorophenol
2,4,6 Trichlorophenol
2,3,4,6-Tetrachlorophenol
2-Methyl-4-Chlorophenol
3-Methyl-4-Chlorophenol
3-Methyl-6-Chlorophenol
2-Chlorophenol
Copper
2,4-Dichlorophenol
2,4-Dimethylphenol
Hexachlorocyclopentadiene
Nitrobenzene
Pentachlorophenol
Phenol
Zinc

EPA review: The criteria for organoleptic effects are consistent with EPA's CWA section 304(a) criteria recommendations and are protective of the drinking water use established by the Pueblo of Laguna. EPA approves the criteria in Appendix I.

Appendix II. Aquatic Life Criteria Table

The Pueblo of Laguna adopted numeric criteria for the following substances to protect aquatic life:

Acrolein
Aldrin
Alkalinity
Aluminum
alpha-Endosulfan
Arsenic
beta-Endosulfan
Carbaryl
Cadmium
Chordane
Chloride
Chlorine
Chlopyrifos
Chorine residual
Chromium (III)
Chromium (VI)
Copper
Cyanide
Demeton
Diazinon
Dieldrin
Endrin
gamma-BHC (Lindane)
Guthion
Heptachlor
Heptachlor epoxide
Iron
Lead
Malathion
Mercury
Methoxychlor
Mirex
Nickel
Nonylphenol
Nutrients
Parathion
Pentachlorophenol
pH
Polychlorinated biphenyls
Selenium
Silver
Sulfide-hydrogen sulfide
Toxaphene
Tributyltin
Zinc
4,4' DDT

The Pueblo of Laguna also adopted narrative criteria, based on EPA's Gold Book for aesthetic qualities, boron, color, total dissolved gases, and hardness.[7] Appendix II includes several footnotes which clarify the derivation or implementation of specific criteria, along with conversion factors for the hardness-based dissolved metals criteria. Appendix II also includes the option to use the Biotic Ligand Model as the copper criteria. The Pueblo of Laguna adopted nutrient criteria by reference to EPA's ecoregion based criteria documents.[8] These criteria documents will be used to interpret numeric values for total phosphorus, total nitrogen, turbidity (streams and rivers) and Secchi depth (lakes).

> **EPA review:** The aquatic life criteria in Appendix II are consistent with EPA's current criteria published under CWA section 304(a), at the time of adoption of the *Pueblo of Laguna Water Quality Standards*. EPA approves the criteria in Appendix II, as protective of the aquatic life and fishery uses in the Pueblo of Laguna's waters.

Appendix III. Ammonia Criteria

The Pueblo of Laguna adopted ammonia criteria to protect fishery uses. The acute criterion includes protection for coldwater and warmwater fisheries. The chronic criterion includes values to protect early life stages of fish, as well as values that are protective when early life stages are absent.

> **EPA review**: The adopted criteria reflect EPA's recommendations published in 1999 under section 304(a). The acute criterion for ammonia (Table C) is dependent on pH and whether salmonids are present or absent. The chronic criterion (Tables A and B) is dependent on pH and temperature. At lower temperatures, the chronic criterion is also dependent on the presence or absence of early life stages of fish. The temperature dependency results in a gradual increase in the criterion as temperature decreases, and a criterion that is more stringent, at temperatures below 15 °C, when early life stages of fish are expected to be present.
>
> In August 2013, EPA published updated criteria recommendations based on additional toxicity data, including tests on sensitive mussel species. Where freshwater mussels are present, both the acute and chronic criteria in EPA's 2013 are generally more stringent than the 1999 criteria. Where mussels are not present, the 2013 acute and chronic draft criteria are comparable to the current criteria. The Pueblo of Laguna's development of WQS, including preparation for public participation, was underway when EPA's updated criteria document was released. Mussel species are not expected to be found in the Pueblo of Laguna's waters. The U.S. Fish and Wildlife Service has noted that the Texas hornshell, found in a tributary of the Pecos River, is the only remaining native mussel in New Mexico. Based on this information, EPA approves the ammonia criteria in Appendix III, as protective of the aquatic life and fishery uses in the Pueblo of Laguna's waters.

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[7] USEPA. 1987. *Quality Criteria for Water 1986*. Office of Water, U.S. Environmental Protection Agency. Washington, D.C. EPA 440/5-86-001. 477 pages. Available at: http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/upload/2009_01_13_criteria_goldbook.pdf

[8] USEPA. 2000 and 2001. Office of Water, U.S. Environmental Protection Agency. Washington D.C. Available at: https://www.epa.gov/nutrient-policy-data/ecoregional-criteria . (See documents for lakes and reservoirs and for rivers and streams, for Ecoregion II – Western Forested Mountains and Ecoregion III – Xeric West.)

Appendix V. Tables: Standards for Various Designated Uses

In Table 1, the Pueblo of Laguna adopted criteria for the following substances to protect human health:

Acenaphthene
Acrolein
Acrylonitrile
Aldrin
alpha-BHC (hexachlorocyclohexane-alpha)
alpha-Endosulfan,
Anthracene
Antimony
Arsenic
Asbestos
Barium
Benzene
Benzidine
Benzo(a)Anthracene
Benzo(a)Pyrene
Benzo(b)Fluoranthene
Benzo(k)Fluoranthene
Beryllium
beta-BHC (hexachlorocyclohexane-beta)
beta Endosulfan
Bis (2-Chloroethyl) Ether
Bis (2-Chloroisopropyl) Ether
Bis-2-Ethylhexylphthalate
Bromoform
Butyl Benzyl Phthalate
Cadmium
Carbon Tetrachloride
Chlordane
Chlorobenzene
Chlorodibromomethane
Chloroform
Chlorophenoxy Herbicide (2,4 D)
Chromium (III)
Chromium (VI)
Chrysene
Copper
Cyanide
Dibenzo(a,h)-Anthracene
Dichlorobromomethane
Dieldrin
Diethyl phthalate
Dimethyl phthalate
Di-n-Butylphthalate
Dinitrophenols
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Ether, Bis (Chloromethyl)
Ethylbenzene
Fluoranthene
Fluorene
gamma-BHC (Lindane)
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclo-hexane-technical
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3-cd) Pyrene
Isophorone
Manganese
Methylmercury [fish tissue]
Methoxychlor
Methyl Bromide
Methylene Chloride
Nickel
Nitrates
Nitrobenzene
Nitrosamines
Nitrosodibutylamine, N
Nitrosodiethylamine, N
Nitrosopyrrolidine, N
N-Nitrosodimethylamine
N-Nitrosodi-n-Proplyamine
N- Nitrosodiphenylamine
Pentachlorobenzene
Pentachlorophenol
pH
Phenol
Polychlorinated Biphenyls
Pyrene
Selenium
Solids, Dissolved and Salinity
Tetrachlorobenzene 1,2,4,5
Tetrachloroethylene
Thallium
Toluene
Toxaphene
Trichloroethylene
Trichlorophenol, 2,4,5
Vinyl Chloride
Zinc
1,1,1-Trichloroethane
1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethylene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,2-Dichloroethane
1,2-Dichloropropane
1,2 Diphenylhydrazine
1,2-Trans-Dichloroethylene
1,3-Dichlorobenzene
1,3-Dichloropropene
1,4-Dichlorobenzene
2,3,7,8-TCDD (dioxin)
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethyl phenol
2,4 Dinitrophenol
2,4 Dinitrotoluene
2-Chloronapthalene
2-Chlorophenol
2-Methyl-4,6-Dinitrophenol
3,3-Dichlorobenzidine
4,4' DDT
4,4' DDE
4,4' DDD

Table 1 includes several footnotes which clarify the derivation or implementation of specific criteria. Footnote C specifies that the maximum contaminant level (MCL) in Appendix IV is used to implement the human health criteria in Appendix V for the following substances: beryllium, cadmium, chlorobenzene, chlorophenoxy herbicide (2,4-D), chromium (III), chromium (VI), methoxychlor, selenium, toluene, 1,1,1-trichloroethane, 1,2-trans-dichloroethylene.

EPA review: The human health criteria in Table 1 are consistent with EPA's CWA section 304(a) criteria recommendations, at the time of adoption of the standards. The criteria for consumption of water and fish and for consumption of fish only are based on the following parameters:

- risk for carcinogens: 10^{-6} (1 per 1,000,000)
- body weight: 70 kg
- water consumption rate: 2 liters/day
- fish consumption rate: 0.0175 grams/day
- cancer potency factors (q1*) and reference doses (RfD): values in EPA's IRIS database or from EPA's criteria recommendations
- bioconcentration factors: values used in EPA's criteria calculations

The criteria range for pH is based on the recommended criteria for recreational activities in EPA's Blue Book. The criteria in Table 1 are protective of the Drinking Water use, the Primary Human Contact/Ceremonial use and the Outstanding Tribal Resource Waters use designated by the Pueblo of Laguna and of the designated uses established by downstream entities. EPA approves the human health criteria and the associated footnotes in Table 1.

In Table 2, the Pueblo of Laguna adopted numeric criteria for the following parameters to protect the Domestic Water Supply use and the Groundwater Recharge use:

Aluminum	Copper	Nitrate (measured as Nitrogen)
Antimony	Cyanide	pH
Arsenic	Fluoride	Radium-226 & 228
Barium	Iron	Selenium
Beryllium	Lead	Sulfate
Bromate	Manganese	TDS
Cadmium	Mercury, total	Thallium
Chloride	Molybdenum	Uranium
Chromium	Nickel	

EPA review: The numeric criteria identified above, and under the column titled "EPA Safe Drinking Water Standards (mg/L)," are based on primary MCLs, secondary MCLs and drinking water effect levels (DWELs) published under the SDWA. These criteria are protective of the Domestic Water Supply use and the Groundwater Recharge use and are approved by EPA. Please see Part II of this enclosure regarding EPA's action on the criteria in Table 2 for groundwater and aquifers.

II. PROVISIONS IN THE 2014 WQS FOR WHICH EPA IS TAKING NO ACTION UNDER CWA SECTION 303(C)

Subchapter I. General Provisions

Section 11-2-3. Definitions

EPA takes no action on the definitions for "Groundwater" and "Pueblo Waters," as they are applied to waters beyond the scope covered under the CWA.

Section 11-2-5. Revisions to Laguna Water Quality Standards

EPA takes no action on the provisions in Part B. Public Comment and Hearing and Part C. Judicial Review. These provisions are not (1) legally binding provisions adopted or established pursuant to Tribal law that (2) address designated uses, criteria, or antidegradation, and (3) describe the desired condition or level of protection of the water body.

Section 11-2-7. Water Rights

EPA takes no action on the provision in Section 11-2-7, as this is implementation provision under Tribal authority.

Section 11-2-9. Dispute Resolution Mechanism

EPA takes no action on the provision in Section 11-2-9, as the Dispute Resolution Mechanism is not (1) legally binding provisions adopted or established pursuant to Tribal law that (2) address designated uses, criteria, or antidegradation, and (3) describe the desired condition or level of protection of the water body.

Subchapter IV. Designated Uses and Associated Numeric Water Quality Standards

Section 11-2-41. List of Designated Uses and Associated Standards

Under Part F. Wildlife Habitat use, EPA also takes no action on the numeric criteria for DDT and PCBs. These criteria are based on EPA's recommendations to protect aquatic life. However, these criteria were not derived to protect wildlife, which are at higher trophic levels on the food chain and may accumulate increased amounts of these compounds. EPA is unable to approve the criteria for DDT and PCBs, as the agency did not have information to document how these values would be protective of wildlife.

Section 11-2-43. Designated Use Table

EPA takes no action on the table on page 28 which includes designated uses for the Pueblo of Laguna's groundwater resources. EPA does not have the authority under CWA section 303(c) to approve or disapprove groundwater provisions that are unrelated to surface water.

Subchapter V. Sampling and Analysis, Variances, and Exceedances

Section 11-2-51. Sampling and Analysis

EPA does not consider Section 11-2-51, which identifies documents that will be used as guidance by the Pueblo of Laguna to assess the attainment of water quality standards, to be water quality standards under CWA section 303(c). EPA takes no action on these provisions because they are not (1) legally binding

provisions adopted or established pursuant to Tribal law that (2) address designated uses, criteria, or antidegradation, and (3) describe the desired condition or level of protection of the water body.

Appendix IV. EPA MCLs for Drinking Water

The Pueblo of Laguna adopted the SDWA maximum contaminant levels (MCLs) for microorganisms, disinfectants, disinfection byproducts, inorganic chemicals, organic chemicals and radionuclides. Appendix IV also includes information on potential health effects and the maximum contaminant level goal (MCLG) for each contaminant. EPA takes no action on Appendix IV as this information was included in the *Pueblo of Laguna Water Quality Standards* for reference.

Appendix V. Tables: Standards for Various Designated Uses

In Table 2, the Pueblo of Laguna adopted criteria for the following parameters to protect groundwater resources

Aluminum
Antimony
Arsenic
Barium
Bicarbonate
Beryllium
Boron
Bromate
Bromide
Cadmium
Calcium
Chloride
Chromium
Copper
Cyanide
Fluoride
Gross alpha particles (includes Radium 226 but not Radon or Uranium)
Iron
Lead
Magnesium
Manganese
Mercury, total
Molybdenum
Nickel
Nitrate (measured as Nitrogen)
pH
Potassium
Radium-226 & 228
Selenium
Silica
Sodium
Sodium + potassium
Strontium
Sulfate
TDS
Temperature
Thallium
Tritium
Uranium
Vanadium
Fecal Coliform and E. coli

Criteria for the aquifers and the groundwater formations are based on SDWA values or on data for specific aquifers. EPA is not taking action on the standards for aquifers and groundwater formations. EPA does not have the authority under CWA section 303(c) to approve or disapprove groundwater provisions that are unrelated to surface water. Please see Part I of this enclosure for EPA's approval of the numeric criteria in the column in Table 2 titled "EPA Safe Drinking Water Standards (mg/L)."